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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/659,777 | 09/10/2003 | Henry Petteri Haverinen | KOLS.047PA | 4888 |

7590 04/03/2007
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| EXAMINER |
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AJAYI, JOEL

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| ART UNIT | PAPER NUMBER |
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2617

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 04/03/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|-------------------------------|--|--|
| Office Action Summary | Application No. 10/659,777 | Applicant(s) HAVERINEN, HENRY PETTERI | |
| | Examiner Joel Ajayi | Art Unit 2617 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Applicant's claim for foreign priority under 35 U.S.C. 119(a-d) is acknowledged.

Information Disclosure Statement

The information disclosure statement submitted on 8/19/04 has been considered by the Examiner and made of record in the application file.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-4, 8-11, 13, 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Perras (U.S. Patent Application Number: 2002/0141369) in view of **Corson et al. (U.S.**

Patent Application Number: 2002/0080752).

Consider **claim 1**; Perras clearly discloses a method for performing handover of a wireless terminal (mobile station) in a telecommunication system, in which a terminal is provided with a connection to a first access device (first service node), from which a tunnel is arranged to a corresponding host for data transmission of the terminal (paragraph 9, line 1 – paragraph 13, line 13; paragraph 19, line 1 – paragraph 22, line 11), and wherein a tunneling IP address (fixed IP address) is allocated in the first access device for a tunnel to be formed for the data transmission of the terminal, to which tunneling IP address (fixed IP address) the tunnel is bound (paragraph 9, line 1 – paragraph 13, line 13; paragraph 19, line 1 – paragraph 22, line 11), the method comprising: transferring at least the tunneling IP address(fixed IP address) from the first access device (first service node) to a second access device (second service node) in response to a change in the connection of the terminal to be carried out by the second access device (paragraph 9, line 1 – paragraph 13, line 13; paragraph 19, line 1 – paragraph 22, line 11); determining a binding in the second access device between the tunneling IP address and a network interface of the second access device (new point of attachment address) (paragraph 9, line 1 – paragraph 13, line 13; paragraph 19, line 1 – paragraph 22, line 11), and updating the information concerning the new binding between the network interface of the second access

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device and the tunneling IP address for at least one network node in the system (paragraph 9, line 1 – paragraph 13, line 13; paragraph 19, line 1 – paragraph 22, line 11).

Except:

Detecting a need to change.

In the same field of endeavor Corson clearly discloses detecting a need to change (paragraph 70, lines 25-32; paragraph 98, lines 1-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Corson into the method of Perras in order to effectively and efficiently maintain communication while a mobile device moves between cells.

Consider **claim 9**; Perras clearly discloses a telecommunication system comprising at least a first access device (first service node), a second access device (second service node) and a terminal (mobile station), in which system the first access device is configured to provide the terminal with a connection (paragraph 9, line 1 – paragraph 13, line 13; paragraph 19, line 1 – paragraph 22, line 11), the first access device is configured to allocate a tunnelling IP address (fixed IP address) for the tunnel to be formed for the data transmission of the terminal, to which tunnelling IP address the tunnel is bound (paragraph 9, line 1 – paragraph 13, line 13; paragraph 19, line 1 – paragraph 22, line 11), the first access device is configured to form a tunnel between a corresponding host and the first access device for data transmission of the terminal (paragraph 9, line 1 – paragraph 13, line 13; paragraph 19, line 1 – paragraph 22, line 11), the first access device is configured to transfer at least the tunnelling IP address to a second access device in response to a change in the connection of the terminal to be carried out by the second access

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device (paragraph 9, line 1 – paragraph 13, line 13; paragraph 19, line 1 – paragraph 22, line 11); the second access device is configured to form a binding between the tunnelling IP address and the network interface of the second access device (new point of attachment address) (paragraph 9, line 1 – paragraph 13, line 13; paragraph 19, line 1 – paragraph 22, line 11), and the second access device is configured to update the information concerning the new binding between the network interface of the second access device and the tunnelling IP address for at least one network node in the system (paragraph 9, line 1 – paragraph 13, line 13; paragraph 19, line 1 – paragraph 22, line 11).

Except:

Detecting a need to change.

In the same field of endeavor Corson clearly discloses detecting a need to change (paragraph 70, lines 25-32; paragraph 98, lines 1-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Corson into the method of Perras in order to effectively and efficiently maintain communication while a mobile device moves between cells.

Consider **claim 13**; Perras clearly discloses an access device (service node) for a telecommunication network, wherein the access device is configured to provide a terminal (mobile station) with a connection (paragraph 9, line 1 – paragraph 13, line 13; paragraph 19, line 1 – paragraph 22, line 11), the access device is configured to allocate a tunnelling IP address for the tunnel to be formed for the data transmission of the terminal, to which tunnelling IP address the tunnel is bound (fixed IP address) (paragraph 9, line 1 – paragraph 13, line 13;

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paragraph 19, line 1 – paragraph 22, line 11), the access device is configured to form a tunnel between a corresponding host and an access device for data transmission of the terminal (paragraph 9, line 1 – paragraph 13, line 13; paragraph 19, line 1 – paragraph 22, line 11), and the access device is configured to send at least said tunnelling IP address to a second access device (second service node) in response to a change in the connection of the terminal to be implemented by the second access device (paragraph 9, line 1 – paragraph 13, line 13; paragraph 19, line 1 – paragraph 22, line 11).

Except:

Detecting a need to change.

In the same field of endeavor Corson clearly discloses detecting a need to change (paragraph 70, lines 25-32; paragraph 98, lines 1-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Corson into the method of Perras in order to effectively and efficiently maintain communication while a mobile device moves between cells.

Consider **claim 16**; Perras clearly discloses an access device (service node) for a telecommunication network comprising means for providing a terminal (mobile station) with a connection and means for forming a tunnel between a corresponding host and an access device for data transmission of the terminal, wherein the access device is configured to receive at least a tunnelling IP address (fixed IP address) allocated for a tunnel for the data transmission of the terminal in response to a change in the connection of the terminal to be implemented by the access device (paragraph 9, line 1 – paragraph 13, line 13; paragraph 19, line 1 – paragraph 22,

line 11), the access device (service node) is configured to form a binding between the tunnelling IP address and the network interface (new point of attachment address) (paragraph 9, line 1 – paragraph 13, line 13; paragraph 19, line 1 – paragraph 22, line 11), and the access device is configured to update the information concerning the new binding between the network interface and the tunnelling IP address to at least one network node included in the system (paragraph 9, line 1 – paragraph 13, line 13; paragraph 19, line 1 – paragraph 22, line 11).

Except:

Detecting a need to change.

In the same field of endeavor Corson clearly discloses detecting a need to change (paragraph 70, lines 25-32; paragraph 98, lines 1-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Corson into the method of Perras in order to effectively and efficiently maintain communication while a mobile device moves between cells.

Consider **claims 2-4, 8, 10, 11, 15, 17**; the combination above clearly discloses that at least an IP address of the corresponding host and the tunnelling IP address allocated to the terminal in the first access device, are determined in an authentication server as a part of the authentication of the terminal before arranging the tunnel to the corresponding host, the tunnelling attributes are transferred to the first access device in response to a successful authentication, the IP address used in the data transmission of the terminal and the tunnelling IP address for the tunnel to be formed for the data transmission of the terminal that is used as an end point of the tunnel transferring data of the terminal are allocated in the first access device to the

terminal, the tunnel determined by the tunnelling attributes is bound in the first access device to the tunnelling IP address, the tunnel, whose end points include the tunnelling IP address and the IP address of the corresponding host, is formed and thereafter the data transmission to the tunnelling IP address is transferred to a network interface of the first access device (Perras, paragraph 9, line 1 – paragraph 13, line 13; paragraph 19, line 1 – paragraph 22, line 11; paragraph 49, line 1- paragraph 52, line 14; Corson, paragraph 70, lines 25-32; paragraph 98, lines 1-12).

Claims 5-7, 12, 14, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Perras (U.S. Patent Application Number: 2002/0141369)** in view of **Corson et al. (U.S. Patent Application Number: 2002/0080752)**, and further in view of **Johansson et al. (U.S. Patent Application Number: 2002/0080752)**.

Consider claims 5-7, 12, 14, and 18; Perras and Corson clearly disclose the claimed invention except that the binding refers to binding between a MAC address of the network interface and the tunnelling IP address.

In the same field of endeavor Johansson clearly discloses that the binding refers to binding between a MAC address of the network interface and the tunnelling IP address (paragraph 18, lines 1-16; paragraph 21, line 1 – paragraph 22, line 21; paragraph 28, lines 1-3; paragraph 79, lines 1-6; paragraph 86, line 1-22).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Johansson into the method of Perras and Corson in order to provide a route optimization technique for mobile devices.

Conclusion

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Joel Ajayi whose telephone number is (571) 270-1091. The Examiner can normally be reached on Monday-Friday from 7:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Joel Ajayi

March 27, 2007


NICK CORSARO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600